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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/533,758

05/04/2005

Karri Osara

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EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1745

MAIL DATE

DELIVERY MODE

06/27/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/533,758

**Applicant(s)**

OSARA ET AL.

**Examiner**

Bruce F. Bell

**Art Unit**

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 5/4/05.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Specification***

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

#### **Arrangement of the Specification**

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
  - (1) Field of the Invention.
  - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).

Applicant is requested to place the above section headings prior to each section of their instant specification.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is vague and indefinite with respect to how the “lower surface of the support bar contact piece, the contact surface touching the electrolysis cell busbar and the contact surface” is achieved. Is there two contact surfaces? It is unclear how the contact surface can touch itself from the instant claim as set forth. Further, the claim is vague and indefinite with respect to how the transmission layer and silver or silver alloy are formed on the area of the lower surface of the support bar and the contact surface of the copper contact piece, if the contact piece and busbar are already mated together, from the instant claim as set forth. Is applicant applying the material with a solder and heating? Or welding?

Claims 2-10 are dependent on instant claim 1 and therefore have the same defect.

Claims 11-12 are vague and indefinite with respect to how the contact surface of the support bar contact piece or lower surface is straightened out linearly, once the contact piece and busbar have already been mated and further how the transmission layer is placed on the lower surface of the contact once the contact and busbar have been mated.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 7, 9-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matsumoto et al (6045669) in combination with Cook (2790656) and Deane et al (4035280).

Matsumoto et al disclose a structure of an electric contact of an electrolytic cell wherein a busbar is coated with a gold plating and the contact piece of the anode or cathode plates is contacted with the busbar. See Abstract, Figure 1, col. 3, lines 29-34, col. 4, lines 51-59.

Matsumoto et al does not disclose the specific materials as set forth in applicants instant claims with respect to the electrical connection, since this cell is for a copper electrowinning cell.

Cook disclose an aluminum dissimilar metal joint and the method of making, wherein an aluminum member has copper bonded to the aluminum member which is connected by means of a tin and lead solder to the copper. The silver or silver alloy can be soldered, brazed or welded. See col. 2, lines 48-70. The primary purpose of the invention is to provide a novel aluminum to copper joint for connections between aluminum bus bars and copper flexes on aluminum reduction cells. See col. 3, lines 19-25. The silver alloy layer coated on the copper is of a thickness of .010 to .035 inches. See col. 5, lines 66-71. A weld is used in the form of a fillet which washes up on the silver surface rather than holding a direct arc on the silver. See col. 6, lines 1-8.

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Deane et al is disclosed to show the contact bar having notches into which the contact piece of the header bars are located when the anodes and cathodes are disposed within the cell. See Figure 1 and abstract. The copper contact pieces are silver plated prior to being welded to the aluminum header bars.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Matsumoto et al does not set forth the specific materials for the electrical connections of the aluminum cathode support bar, Matsumoto et al does show the construction for an electrolytic cell that is used for copper, and since it is known in the art that the same construction for cells that produce copper and zinc are used and that in the zinc cell, aluminum anodes are used and in copper cells, stainless steel is used for cathodes, one having ordinary skill in the art would recognize through the teachings of Cook and Deane et al that for aluminum anodes, one would use copper, tin and silver or silver alloy materials to make the electrical connections in the cell, in place of those materials used in the copper electrowinning cells, since the anode and cathode materials in both types of cells are known to those having ordinary skill in the art. Therefore, the prior art of Matsumoto et al in combination with Cook and Deane et al render the applicants instant invention as obvious for the reasons set forth above.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on 571 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB  
June 25, 2007

  
Bruce F. Bell  
Primary Examiner  
Art Unit 1746